

REMARKS

Applicants respectfully request reconsideration in view of the foregoing amendments and following remarks.

Claim Status

After entry of the foregoing amendments, claims 1, 2, 4, 5, 8-12, and 14-21 are pending in this application, of which claims 1, 5, 15, 17, and 19 are independent in form. Claims 14-21 are added and claims 1, 5, 10, 11, and 12 are amended herein. No new matter is added by these amendments.

Information Disclosure Statement

Applicants submit herewith an Information Disclosure Statement and corresponding Form PTO-1449. The Examiner is respectfully requested to return an initialed copy of the Form PTO-1449 indicating that the disclosed references have been fully considered by the Examiner.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 2, 4, 5, and 8-12 are rejected under 35 U.S.C. § 103(a) allegedly as being unpatentable over Deter et al., U.S. Patent No. 5,822,022 (“Deter”) in view of Baba et al., U.S. Patent No. 6,626,542 (“Baba”). Applicants respectfully disagree with the characterization of the claims and of the prior art in the stated rejection and respectfully traverse this rejection.

Amended independent claims 1 and 5 are directed to a scan type display optical system comprising, *inter alia*, “an optical scanning device which includes a mirror that is rotated

to deflect and scan light” and “a mechanism which supports and rotates the optical scanning device.”

On the other hand, Deter discloses an optical system 30 that includes a swiveling mirror 40. However, Deter fails to disclose a mechanism which supports and rotates the swiveling mirror 40. As the Examiner points out, FIG. 1 of Deter shows two bars, apparently forming an axle, which would inherently have to be mounted to support the swiveling mirror 40. The Examiner also notes that FIG. 2 of Flint, U.S. Patent No. 6,351,324 (“Flint”) teaches mechanisms 254 and 240 for supporting mirrors. Applicants respectfully disagree with the characterization of the teachings attributed to Deter and Flint in the stated rejection.

Flint teaches a polygon mirror 233 that rotates about a central axis 239, wherein a rotating mechanism 240; such as a motor, is connected by an axle 241 to the central axis 239, which rotates the polygon mirror 233 (col. 11, lines 11-24). Further, Flint teaches a galvo mirror 252 that rotates about an axis 256, wherein a galvo scanner 250 is connected by an axle to the axis 256, which rotates the galvo mirror 252 (col. 11, lines 47-57). That is, Flint merely teaches using a motor and an axle to support and rotate a mirror.

Applying Flint’s teachings to Deter’s system merely suggests that a motor and axle are connected to one of the bars of Deter’s swiveling mirror 40, which is shown in FIG. 1. Thus, the combination of the teachings of Deter and Flint merely suggests a scan type display optical system comprising a mirror that is rotated to deflect and scan light and a mechanism which supports and rotates the *mirror*. That is, the combination of Deter and Flint fails to disclose or suggest “an optical scanning device which includes a mirror that is rotated to deflect and scan light” and “a mechanism which supports and rotates the *optical scanning device*” as required by independent claims 1 and 5.

Thus, neither Deter nor Flint teach or suggest the structure of the optical scanning device recited by independent claims 1 and 5. Accordingly, independent claims 1 and 5 are believed to define patentable subject matter. Further, dependent claims 2, 4, and 8-12, which ultimately depend from independent claim 1, are believed to define patentable subject matter for at least similar reasons.

Applicants respectfully submit that the present invention as claimed is neither taught nor suggested by, and therefore neither anticipated by nor rendered obvious in view of, Deter or Baba, taken individually or in combination. Applicants have not independently addressed the rejections of the dependent claims as Applicant believe that the foregoing places the independent claims in condition for allowance. Applicant, however, reserves the right to address those rejections in the future should such a response be deemed necessary and appropriate.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims under 35 U.S.C. § 103(a).

Double Patenting

Claims 1, 2, 4, 5, and 8-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Sunaga, U.S. Patent No. 6,626,541 ("Sunaga") in view of Deter. Applicants respectfully disagree with the characterization of the claims and the teachings of Sunaga in the stated rejections traverse this rejection.

Like Deter and Baba, Sunaga also fails to disclose or suggest the claimed invention. For example, Sunaga fails to disclose or suggest "an optical scanning device which

includes a mirror that is rotated to deflect and scan light” and “a mechanism which supports and rotates the optical scanning device” as required by independent claim 1. Claims 2, 4, 5, 8-12, are believed to define patentable subject matter for at least similar reasons.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection applied to claims 1, 2, 4, 5, and 8-12 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of Sunaga in view of Deter.

Newly Added Claims

Newly added independent claims 15 and 17 require, *inter alia*, “a mirror ... a device which rotates the mirror; and a mechanism which rotates the device.” As stated above, Deter, Baba, and Sunaga, alone or in combination, fail to teach or suggest this claimed arrangement.

Further, Deter, Baba, and Sunaga, alone or in combination, also fail to teach or suggest a “display optical system which projects two dimensional image to a projected surface, comprising: a mirror which reflects an incident light; a projection optical system which has a plurality of reflective surfaces and guides the light from the mirror to the projected surface to form the two dimensional image on the projected surface; and a mechanism which rotates the mirror, wherein the position of the two dimensional image on the projected image is shifted by rotating the mirror through the mechanism” as required by newly added independent claim 19.

Moreover, newly added dependent claims 14, 16, 18, 20, and 21 are believed to define patentable subject matter for at least similar reasons as those presented above regarding the independent claims from which they depend.

CONCLUSION

In view of the foregoing, the present invention as recited in the claims presented herein is believed patentably distinct over the art of record and Applicants respectfully request that the respective rejections and objections be withdrawn. The application is believed to be hereby placed in condition for allowance, which action is respectfully requested. If any outstanding issues remain, however, the Examiner is invited to contact the undersigned at the telephone number below.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 1232-5286.

In the event that an extension of time is required in addition to that requested in the accompanying Petition, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 1232-5286.

Respectfully submitted,
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Dated: March 6, 2006

By: _____


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